

WAGE CERTIFICATE

SUBJECT: BID NO.: IFB-CMB-2020-36

DESCRIPTION OF PROJECT

**FURNISH PREVENTIVE MAINTENANCE SERVICES TO
FIRE PREVENTION SYSTEMS AT VARIOUS HPHA PROPERTIES ON
OAHU**

Pursuant to Section 103-55, Hawaii Revised Statutes (HRS.), I hereby certify that if awarded the contract is in excess of \$25,000.00 the services will be performed under the following conditions:

1. The services shall be performed by employees at wages or salaries not less than wages or salaries paid to public officers and employees doing similar work.
2. All applicable laws of the Federal and State governments relating to worker's compensation, unemployment compensation, payment of wages, and safety will be fully complied with.

I understand that all payments required by Federal and State laws to be made by employers for the benefit of their employees are to be paid in addition to the base wages required by section 103-55, HRS.

BIDDER: _____

BY: _____
Signature of Person Authorized to Sign this Bid.

Please Print

NAME: _____

TITLE: _____

DATE: _____

IFB-CMB-2020-36
SEALED BID OFFER

Hawaii Public Housing Authority
Contract and Procurement Office
1002 North School Street, Bldg. D
Honolulu, Hawaii 96817

Dear IFB Coordinator:

The undersigned has carefully read and understands the terms and conditions specified in the Sealed Invitation for Bids, Specifications and the General Conditions by reference made a part of this Bid and hereby submits the following offer to perform the work specified.

That the undersigned further understands and agrees that by submitting this Sealed Bid Offer, 1) it is declaring its Bid Offer is not in violation of Chapter 84, Hawaii Revised Statutes, concerning prohibited State contracts, and 2) it is certifying that the price(s) submitted was (were) independently arrived at without collusion.

Date: _____

Respectfully submitted,

Telephone No.: _____

Fax No.: _____

Legal Name of Bidder (Company Name)

Remittance address, if different from business address:

Authorized Signature (Original)

Printed Name and Title of Authorized Signer

Hawaii General Excise Tax License
I.D. No.: _____

Business Address

Federal Tax I.D. No. or Social Security No.: _____

City, State, Zip Code

Bidder is: ☐ Individual ☐ Partnership ☐ Corporation ☐ Joint Venture

State of Incorporation: ☐ Hawaii ☐ *Other: _____

*If "other", is corporate seal available in Hawaii? ☐ Yes ☐ No

1. Provide the names and address of companies or government agencies in which the bidder has provided or is currently providing custodial services as mentioned in Question 1 above along with the dates of services.

Company or Agency	Contact Person	Telephone No.	Dates of Service

2. Insurance coverage to be provided by:

Insurance Type	Provider	Agent Name	Agent Phone No.
General Commercial Liability			
Automobile			
Workers Compensation			

FURNISH PREVENTIVE MAINTENANCE SERVICE TO FIRE PREVENTION SYSTEMS AT VARIOUS HPHA PROPERTIES ON OAHU

	Initial 12-Months (including Tax)	Option Year 1 (including Tax)	Option Year 2 (including Tax)	Option Year 3 (including Tax)	Option Year 4 (including Tax)	TOTALS
	4 x \$ _____ = \$ _____	4 x \$ _____ = \$ _____	4 x \$ _____ = \$ _____	4 x \$ _____ = \$ _____	4 x \$ _____ = \$ _____	
A. Kalakua Homes 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
B. Makua Alii 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
C. Paoakalani 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
D. Punchbowl Homes 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
E. Kalanihulia 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
F. Makamae 1. Standpipe Systems 2. Standpipe Booster Pump Sub-Total	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	\$ _____
G. Spencer House 1. Standpipe System Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
H. Punehana 1. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ \$ _____	\$ _____
I. Hale Poi 1. Fire Booster Pump System 2. Standpipe Systems Sub-Total	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	4 x \$ _____ = \$ _____ 4 x \$ _____ = \$ _____ \$ _____	\$ _____

FURNISH PREVENTIVE MAINTENANCE SERVICE TO FIRE PREVENTION SYSTEMS AT VARIOUS HPHA PROPERTIES ON OAHU

	Initial 12-Months (including Tax)	Option Year 1 (including Tax)			Option Year 2 (including Tax)			Option Year 3 (including Tax)			Option Year 4 (including Tax)			TOTALS
		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
J. <u>Laiola - Bldg A & B</u>														
1. Fire Booster Pump System (2)		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
2. Standpipe Systems		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
Sub-Total			\$			\$			\$			\$		\$
K. <u>Kamalu</u>														
1. Fire Pump System		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
2. Automatic Fire Sprinkler System		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
3. Standpipe Systems		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
Sub-Total			\$			\$			\$			\$		\$
L. <u>Hoolulu</u>														
1. Fire Pump System		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
2. Automatic Fire Sprinkler System		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
3. Standpipe Systems		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
Sub-Total			\$			\$			\$			\$		\$
M. <u>Halia Hale</u>														
1. Automatic Fire Sprinkler System		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
2. Standpipe Systems		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		4 x \$	= \$		
Sub-Total			\$			\$			\$			\$		\$
TOTALS			\$			\$			\$			\$		\$

PRICE PROPOSAL SUMMARY FORM

Offerors will summarize their price proposal below and should be the same price(s) as listed above. Do not leave any item blank as it may be deemed non-responsive.

Initial 12-Months	\$ _____
Option Year 1	\$ _____
Option Year 2	\$ _____
Option Year 3	\$ _____
Option Year 4	\$ _____
Grand Total	\$ _____

TECHNICAL SPECIFICATIONS / REPORTING REQUIREMENTS

1.0 EQUIPMENT MAINTENANCE

1.01 GENERAL

- A. The services shall consist of performing required operational and preventive maintenance services of the fire prevention systems at various HPHA properties. The services shall include quarterly and annual inspections per fire prevention system.
- B. Such services are to be conducted in accordance with the best practices of the industry governing the operation and maintenance of fire prevention systems and in accordance with manufacturer's instructional manuals, so as to assure the final effluent is within the Hawaii Department of Health Regulations, State of Hawaii Fire Code and Fire Prevention Bureau requirements.
- C. Such services will include furnishing and paying for labor, materials, minor parts, and tools necessary to properly operate and maintain the existing fire prevention systems, including but not limited to overall inspection, fire booster pump systems, standpipe systems, standpipe booster pumps, automatic fire sprinkler systems, trash chute fire sprinklers and heat detectors, controls, fire extinguishers, fire hoses, nozzles and fire hose appliances. Minor parts shall mean those parts costing less than \$50.00 and major parts shall mean parts costing individually \$50.00 or more as shown on the manufacturer's price list.
- D. Only new standard parts manufactured by the maker of each unit or parts of equal quality shall be used. The CONTRACTOR will be furnished or compensated by the HPHA for any major parts or equipment replacement. The CONTRACTOR must maintain a running log checklist for each of the fire prevention systems, recording the date of each operational and maintenance service work performed and who performed the work. The log book shall be kept in the Officer-in-Charge's office at the property site.
- E. Fire prevention systems may be added to or deleted from this Contract upon written notice from the HPHA Purchasing Office. The costs for additions will be consistent with similar costs for like service under this Contract.

1.02 SCOPE OF SERVICES

- A. The services shall include the inspection and testing of units described in Section 3.01 EQUIPMENT SCHEDULE below. Each unit shall have one (1) annual and three (3) quarterly inspections each year. The inspection level for each visit is described herein.
- B. At the end of the contract, furnish two (2) bound copies of warranties of any new parts and typewritten inspection reports containing all test results, technician's comments, and other pertinent information. Manufacturer, model number and serial number for each unit shall identify equipment in the report. All test results and reports shall be sent to the HPHA no later than ten days after completion of service work. A copy of the technicians' field report shall be delivered to the HPHA upon completion of each

service visit. The HPHA shall be furnished an electronic copy of the test reports in PDF format. Other formats may be accepted with prior approval.

Inspection Reports:

For each fire prevention system, a typewritten recorded log report containing all test results, technician's comments, and other pertinent information shall be completed. Equipment shall be identified in the report by manufacturer, model number and serial number. Applicable reports shall include "as-found" and "as-left" conditions. A copy of the technicians' field report shall be delivered to the HPHA within 10 days after completion of each service visit. Upon completion of each quarterly inspection and each annual inspection, the completed reports for all fire prevention systems listed in section 3.01, shall be compiled per project and bound together into a single document. The HPHA shall be furnished with two (2) identical copies of this compiled report along with one (1) electronic copy. An electronic copy shall be submitted on a flashdrive or approved substitute in Microsoft Word format. The two (2) bound inspection reports and one (1) electronic report shall be submitted to the HPHA no later than 10 days after completion of last inspection.

Inspection report for each fire prevention shall be submitted with the quarterly invoices. Payments shall not be processed until the required records of each service visit are received by the Contract Administrator.

- C. Submit labor rates for repairs outside of the specific scope of work of this Contract the awarded vendor will be required to honor these rates. Repairs not exceeding a total of \$500.00 may be performed with the written authorization of the Contract Administrator. Such repairs will be billed at the bid labor rate with the material price not to exceed the vendor's actual cost plus 10%. The HPHA reserves the right to request documentation of the vendor's actual cost.

1.03 SCHEDULING

- A. Services shall be scheduled between 8:00 a.m. and 4:00 p.m. Monday through Friday. All work shall be scheduled at the HPHA's convenience and in cooperation with the Officer-in-Charge. Response to each condition shall not exceed more than two (2) hours from the time it was called in by the HPHA. The CONTRACTOR shall provide priority to the HPHA on all the scheduled repairs.
- B. The annual service work shall be completed within thirty days prior to the end of the 12-month period.
- C. The first quarterly inspections shall occur within 80-100 days of the start of the 12-month period.

1.04 SAFETY

- A. The CONTRACTOR in cooperation with the HPHA personnel shall develop and review a work plan in accordance with OSHA regulations for each day's work.
- B. The CONTRACTOR shall take all necessary precautions to protect the public and tenants from injury resulting from its work.

- C. The CONTRACTOR shall take whatever steps may be necessary to safeguard its work, the property of the HPHA as well as other individuals in the vicinity of the work area during the execution of this Contract. It shall be responsible for and make good on any and all damages and for losses to work or property caused by its or its employee's negligence.

1.05 STORAGE OF MATERIAL AND EQUIPMENT

- A. No materials or equipment shall be stored at the jobsite. The HPHA shall not be responsible for the loss or damage of any materials and equipment left on site.

1.06 REFERENCE STANDARDS

- A. The work shall comply with the manufacturer's recommendations, these specifications, and the applicable the 2012 NFPA (State of Hawaii Fire Code), 2012 International Building Code, International Residential Code 2012, NFPA 70 – National Electrical Code 2017, 2012 Uniform Plumbing Code, and the NFPA 1 – State of Hawaii Fire Code 2012. and all other applicable ordinances of the City and County of Honolulu. Work shall be carried out in compliance with applicable safety regulations.

- B. All inspections shall conform to:

NFPA 25: Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, and NFPA 1962 Standard for the Care, Use, Inspection, Service Testing, and Replacement of Fire Hose, Couplings, Nozzles, and Fire Hose Appliances

Americans with Disabilities Act Accessibility Guidelines, September 2002

Department of Justice Americans with Disabilities Act, 2010

1.07 INVOICE REQUIREMENTS

- A. Invoices for each of the quarterly and annually /test shall be submitted per project. Each fire prevention system shall be an individually priced and specifically identified line item on the invoice.

Note: Payments shall not be processed until the required records of each service visit are received by the Contract Administrator.

2.0 REQUIREMENTS:

2.01 GENERAL

- A. The work described under any of the following sections shall not commence for any particular item of equipment until the testing and inspection plan has been discussed and with the Contract Administrator.
- B. Variations from the following general procedures will be allowed if all tests, adjustments and cleaning are accomplished.

- C. This section refers to manufacturer's published instruction manuals for specific requirements for each item of equipment. The items included in this section are intended to indicate the required level of inspection, maintenance, and testing rather than specific procedures.
- D. For all inspection, maintenance, and testing tasks, written notation(s) of condition found, condition left, and any action taken.
- E. All replacement parts shall be Original Equipment Manufacturer (OEM) parts, or approved equal. Variations may be allowed with authorization of the Contract Administrator.

2.02 SPECIFICATION FOR SERVICES OF FIRE PREVENTION SYSTEMS

- A. The Contractor shall submit a schedule of service for all fire prevention systems and shall maintain a log or record keeping system to document all readings, problems, repairs, and maintenance performed on the equipment.

All service performed by the Contractor shall include applicable items listed but shall not be limited to the following maintenance task:

- 1. Fire Pumps: Inspect, test, and maintain fire pumping equipment in accordance with NFPA 20 and NFPA 25
 - a. Inspect and test pre-action fire sprinkler system and equipment in accordance with NFPA 25. Inspection: The purpose of inspection shall be to verify that the pump assembly appears to be in operating condition and is free from physical damage.
 - (1) Quarterly:
 - (A) Pump suction and discharge and bypass valves are fully open.
 - (B) Piping is free of leaks.
 - (C) Suction line pressure gauge reading is within acceptable range.
 - (D) System line pressure gauge reading is within acceptable range.
 - (E) Waterflow test valves are in the closed position.
 - (F) Controller pilot light (power on) is illuminated.
 - (G) Transfer switch normal pilot light is illuminated.
 - (H) Isolating switch is closed – standby (emergency) source.
 - (I) Reverse phase alarm pilot light is off, or normal phase rotation pilot light is on.
 - (J) Oil level in vertical motor sight glass is within acceptable range.

(K) Power to pressure maintenance (jockey) pump is provided.

- b. Testing: A non-flow test shall be conducted for electric motor driven fire pumps without recirculating water back to the pump suction on a test frequency in accordance with NFPA 25.

(1) Quarterly:

- (A) A test of the fire pump assemblies shall be conducted without flowing water. Following NFPA 25.
- (B) Record the pump starting pressure from the pressure switch or pressure transducer.
- (C) Record the system suction and discharge pressure gauge readings.
- (D) Inspect the pump packing glands for slight discharge.
- (E) Adjust gland nuts if necessary.
- (F) Inspect packing boxes, bearings, or pump casing for overheating.
- (G) Record pressure switch or pressure transducer reading and compare to the pump discharge gauge.
- (H) Record the current pressure and the highest and the lowest pressure shown on the fire pump controller event log.
- (I) Observe the time for motor to accelerate to full speed.
- (J) Record the time controller is on first step (for reduced voltage or reduced current starting).
- (K) Record the time pump runs after starting (for automatic stop controllers).

(2) Yearly:

- (A) A test of the fire pump assembly shall be conducted under no-flow (churn), rated flow, and 150 percent of the pump rated capacity flow of the fire pump by controlling the quantity of water discharged through approved test devices.
- (B) If available suction supplies do not allow flowing of 150 percent of the rated pump capacity, the fire pump shall be tested to the maximum allowable discharge.
- (C) Automatic transfer switched shall be tested routinely and exercised in accordance with NFPA 110.

- (D) Test results and any documented performance issues shall be recorded and retained. Any abnormality observed during inspection or testing shall be reported promptly. All time delays shall be recorded.
- c. Maintenance: A preventive maintenance program shall be established on all components of the pump assembly in accordance with the manufacturers recommendations and NFPA 25.
 - (1) Yearly Service (1 times per year):
 - (A) Lubricate pump bearings and check pump and motor bearings for abnormal temperature and unusual noise or vibration and repair as needed. Record findings.
 - (B) Check pump shaft end play and seals for leakage. Adjust, tighten or replace as required. Record condition on service report.
 - (C) Check pump coupling alignment. Adjust, tighten or replace as required. Lubricate coupling annually. Record condition on service report.
 - (D) Check and record accuracy of pressure gauges and sensors. Replace or recalibrate when five percent (5%) out of calibration.
 - (E) Check and clean strainers after each pump operation.
 - (F) Clean and wipe down fire pumps and control panels.
 - (G) Exercise isolating switch and circuit breaker.
 - (H) Operate manual starting means.
 - (I) Check and operate emergency manual starting means (without power).
 - (J) Calibrate pressure switch settings.
- 2. Sprinkler System: Inspect, test, and maintain fire sprinkler system in accordance with NFPA 13 and NFPA 25.
 - a. Inspection: Sprinklers shall not show signs of leakage, free of corrosion, foreign materials, pain, and physical damage, and shall be installed in the correct orientation. Inspection of items in concealed spaces or in areas that are inaccessible for safety considerations shall not require inspection.
 - (1) Quarterly:
 - (A) Inspect all gauges (dry, preaction, wet pipe, and deluge systems) to ensure they are in good condition and that normal water supply pressure is being maintained.

- (B) Control valves shall be free of physical damage.
 - (C) Waterflow alarm and supervisory signal initiating devices shall be inspected quarterly to verify that they are free of physical damage.
 - (D) Hydraulic design nameplate information sign to ensure that it is provided, attached securely to the sprinkler riser, and is legible.
- (2) Yearly:
- (A) Hanger and seismic bracing shall be inspected from the floor level. Hangers or braces that are damaged, loose, or unattached shall be replaced or refastened.
 - (B) Pipe and fittings shall be inspected from the floor level and shall be in good condition and free of mechanical damage, leakage, and corrosion.
 - (C) Sprinklers shall be inspected from the floor level that show signs of corrosion, leakage, physical damage, loss of fluid in the glass bulb heat-responsive elements, loading, painting shall be replaced. Any sprinklers installed in the incorrect orientation shall be corrected. Installation of sprinklers shall follow NFPA 13.
 - (D) Supply of spare sprinklers shall be inspected for the correct number and type, a sprinkler wrench for each type of sprinkler, list of spare sprinklers.
 - (E) General information sign required by NFPA 13 shall be inspected to verify that it is provided, securely attached, and legible.
 - (F) Valves shall be in the following condition: normal open or closed position; sealed, locked, or supervised; accessible; post indicator valves are provided with correct wrenches; free from external leaks; provided with applicable identifications.
 - (G) Fire department connections shall be inspected for the following: connections are visible and accessible; couplings or swivels are not damaged and rotate smoothly; plugs or caps are in place and undamaged; Gaskets are in place and in good condition; identification signs are in place; the check valve is not leaking; automatic drain valve is in place and operating properly; clapper is in place and operating properly; interior of the connection is inspected for obstructions.
- b. Testing: Testing of the following items shall be in accordance with NFPA 25.
- (1) Quarterly:
- (A) Mechanical waterflow alarm devices, vane and pressure switch-type shall be tested to ensure proper operation.

(2) Yearly:

- (A) Valve supervisory switches shall be tested. A distinctive signal shall indicate movement from the valve's normal position.
- (B) Each control valve shall be operated annually through its full range and returned to its normal position.
- (C) Where sprinklers have been in service for 50 years, they shall be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be tested at 10 year intervals. Fast response sprinklers in service for 20 years shall be replaced or tested at 10 year intervals.
- (D) Where sprinklers have been in service for 75 years, they shall be replaced or representative samples from one or more sample areas shall be tested. Test procedures shall be tested at 5 year intervals.
- (E) Where sprinklers are subject to harsh environments have been in service for five (5) years, they shall be replaced or representative samples from one (1) or more sample areas shall be tested. Test procedures shall be tested at five (5) year intervals.
- (F) Where one (1) sprinkler within a representative sample fails to meet the test requirement, all sprinklers within the area represented shall be replaced.
- (G) Gauges shall be replaced every five (5) years or tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three percent (3%) of the full scale shall be recalibrated or replaced.

c. Maintenance: Preventive maintenance of the following items shall be in accordance with NFPA 25.

(1) Yearly:

- (A) Operation of stems of outside screw and yoke valves shall be lubricated annually.
- (B) Check valves internal components shall be cleaned, repaired, or replaced as necessary in accordance with manufacturer's recommendations.
- (C) Low point drains
- (D) Replacement sprinklers shall have the proper characteristics for the application intended. Only new listed sprinklers shall be used.

3. Standpipes: Inspect, test, and maintain standpipe system in accordance with NFPA 25.
 - a. Inspection: The purpose of inspection shall be to verify that the standpipe appears to be in operating condition and is free from physical damage.
 - (1) Quarterly:
 - (A) Gauges on all standpipe systems shall be inspected weekly to ensure that normal air or nitrogen and water pressure are being maintained
 - (2) Yearly:
 - (A) Gauges on automatic wet and semiautomatic dry standpipe systems shall be inspected to ensure that they are in good condition and that normal water supply pressure is being maintained.
 - (B) Inspect components of standpipe and hose systems visually.
 - (C) Inspect hose connections, cabinets, hose, hose storage devices, and hose nozzles annually to ensure they are free from damage, corrosion tampering or other conditions that adversely affect system operation.
 - b. Testing: Where water damage is a possibility, an air test shall be conducted on the system at 25 psi (1.7 bar) prior to introducing water to the system.
 - (1) Yearly:
 - (A) Waterflow alarm devices shall be tested for functionality.
 - (B) Hose storage device shall be tested annually for leaks at working system pressure.
 - (C) Mechanical waterflow alarm devices, including but not limited to water motor gongs, shall be tested quarterly. Vane-type and pressure switch-type waterflow devices shall be tested semi-annually.
 - (D) A flow test shall be conducted every five (5) years for each zone of an automatic standpipe system to verify that all required flow and pressure are available at the hydraulically most remote hose valve outlet(s) while flowing the standpipe system demand. Test flow values shall be acceptable in accordance with NFPA 25.
 - (E) Hydrostatic tests shall be conducted every (5) years on manual standpipe systems and semiautomatic dry standpipe systems, including piping in the fire department connection. Test hydrostatic values shall be acceptable in accordance with NFPA 25.

- (F) Gauges shall be replaced every five (5) years and tested every five (5) years by comparison with a calibrated gauge. Gauges not accurate to within three percent (3%) of the full scale shall be recalibrated or replaced.
- c. Maintenance: A preventive maintenance program shall be established on all components of the standpipe system in accordance with the manufacturer's recommendations and NFPA 25. Equipment that does not pass the inspection or testing requirements shall be repaired and tested again or replaced.
 - (1) Yearly Service (one (1) time per year):
 - (A) Hose connections and valves shall be maintained annually or as needed to ensure they are not damaged or leaking.
- 4. Fire Extinguishers: Inspect, maintain, and recharge fire extinguishers in accordance with NFPA 10.
 - a. Inspection: The purpose of inspection shall be to verify that the fire extinguisher appears to be in operating condition and is free from physical damage.
 - (1) Annually:
 - (A) Pressure gauge reading or indicator in the operable range or position.
 - (B) Location in designated place with no obstruction to access or visibility.
 - (C) Verify that operating instructions on nameplate are legible and face outward.
 - (D) Check for broken or missing safety seals and tamper indicators.
 - (E) Examine for obvious physical damage, corrosion, leakage, or clogged nozzle.
 - (F) Where manual inspections are conducted, the month and year the manual inspection was performed and the initials of the person performing the inspection shall be recorded.
 - (G) Recharging shall be in accordance with manufacturer recommendations and NFPA 10 requirements.
 - b. Maintenance: A preventive maintenance program shall be established on all components of the fire extinguisher in accordance with the manufacturer's recommendations and NFPA 10. Equipment that does not pass the inspection or maintenance requirements shall be repaired or replaced. Fire

extinguishers shall be internally examined at intervals not exceed NFPA 10 requirements or once within the five (5) year contract.

(1) Annually:

- (A) All removable extinguisher boots, foot rings, and attachments shall be removed to accommodate cylinder examinations.
- (B) When maintenance of any fire extinguisher reveals a deficiency, immediate corrective action shall be taken.
- (C) Six year internal examinations shall be as detailed in the manufacturer's service manual and NFPA 10.

- E. Work Schedule: All maintenance work shall be performed between the hours of 8:00 a.m. to 4:00 p.m., on normal working days, Monday through Friday, excluding State Holidays.
- F. Trouble Calls: Emergency service and repairs required between regular service calls shall be rendered within 24 hours after the Contractor is notified, non-work days excluded.
- G. Maintenance Report/Checklist: The Contractor shall prepare and maintain a maintenance service report/checklist which shall include the following:
 - 1. Date maintenance service was performed.
 - 2. The name of the mechanic who performed said maintenance.
 - 3. The type and cost (labor, materials, parts and equipment) of repair work performed on the unit, if any.
 - 4. Documents and other data pertaining to the maintenance performed.

It will be the responsibility of the Contractor to maintain the report/checklist by recording the above noted data after each scheduled maintenance and emergency repairs, and have the checklist available for inspection at the building site. The report shall be sufficiently detailed to properly reflect the past maintenance history of the equipment.

- H. Cleanup and Work Practices: The Contractor shall keep the job site free of debris, litter, discarded parts, etc. and shall clean all oil drippings during the daily progress of work. The Contractor shall remove all tools, parts and equipment from the service areas upon completion of the work. The Contractor shall exercise caution during the progress of his maintenance and repair work to prevent damage to the ceilings, roofing and other building structure. The Contractor shall restore all damages, caused by his negligence, to its original condition at his own expense.
- I. All costs for periodic maintenance services shall be included in the bid price.
- J. Charges for emergency situations, increases and changes in preventive maintenance services shall be submitted on a separate invoice and will be paid for by a separate purchase order.

- K. The Maintenance Service Contract does not include repairs resulting from vandalism, negligent use or misuse of equipment.

3.0 INFORMATION

3.01 EQUIPMENT SCHEDULE

A. FIRE PREVENTION SYSTEMS INFORMATION

1. Kalakaua Homes: 1583 Kalakaua Ave. Honolulu, HI 96826.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
2. Makua Alii: 1541 Kalakaua Ave. Honolulu, HI 96826.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
3. Paoakalani: 1545 Kalakaua Ave. Honolulu, HI 96826.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
4. Kalanihulia: 1220 Aala St. Honolulu, HI 96817.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
5. Pumehana: 1212 Kinau St. Honolulu, HI 96814.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
6. Punchbowl Homes: 730 Captain Cook Ave. Honolulu, HI 96813.
Standpipe Systems (Class I&II), Trash Chute Automatic Fire Sprinkler System and Heat Detectors, Fire Hoses and Fire Extinguishers.
7. Makamae: 21 South Kuakini Street Honolulu, HI 96813.
Standpipe Systems (Class I&II), Standpipe Booster Pump, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.
8. Spencer House: 1035 Spencer Street Honolulu, HI 96822.
Standpipe Systems (Class II) and Fire Extinguishers.
9. Hale Poai: 1001 N. School Street, Honolulu, HI 96817.
Standpipe Systems (Class I&II), Fire Booster Pump System, Automatic Fire Sprinkler System, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.
10. Ho'olulu: 94-943 Kau'olu Pl. Waipahu, HI 96797.
Standpipe Systems (Class I&II), Fire Booster Pump System, Automatic Fire Sprinkler System, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.

11. Kamalu: 94-941 Kau'olu Pl. Waipahu, HI 96797.
Standpipe Systems (Class I), Fire Booster Pump System, Automatic Fire Sprinkler System, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.
 11. La'iola Building A & B: 1 & 15 Ihoiho Pl. Wahiawa, HI 96786.
Standpipe Systems (Class I), Fire Booster Pump System, Automatic Fire Sprinkler System, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.
 13. Halia Hale: 851 North School Street Honolulu, HI 96817.
Standpipe Systems (Class I), Fire Booster Pump System, Automatic Fire Sprinkler System, Trash Chute Automatic Fire Sprinkler System and Heat Detectors and Fire Extinguishers.
- B. Notification of the HPHA Staff and Residents: When necessary, the Contractor shall notify the Officer-in-Charge at least 72 hours in advance of any work that would produce excessive noise or may produce utility outages.

3.02 CLEAN-UP

- A. At completion of each operational and/or maintenance service or emergency service, the Contractor shall clean up and remove all rubbish, and debris from the premises resulting from this work and shall keep the entire area clean and neat.

END OF SECTION